

REMARKS

Claims 1-22 are pending in the present application.

Claims 1-7 and 9-19 are rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,535,313 of Fatehi et al ("Fatehi").

Claims 8 and 20-22 are rejected under 35 U.S.C. §103(a) as being unpatentable over Fatehi.

Claim 1 is rejected under 35 U.S.C. §102(e) as being anticipated by Fatehi. Specifically, the Examiner states that:

Regarding claim 1 – Fatehi discloses an exchange area network (XANI) xswitch, refer to Figure 4 callout 450 and column 5 lines 30 to 67 and column 6 lines 1 to 18.

Fatehi discloses a wide area network (WAN) wavelength switch coupled to the XAN xswitch, refer to Figure 4 and callouts 450 and 470 and column 5 lines 30 to 67 and column 6 lines 1 to 18. (3/29/05 Office Action, p. 2)

Fatehi discloses a method and apparatus which attempt to provide desired communication services over optical links based on traffic demand on the links by dynamically assigning the number of wavelengths at originating and terminating optical signal access apparatus, in response to variations in network traffic. (Fatehi, col. 1, lines 19-20, 34-38) Specifically, Fatehi discloses and illustrates in FIG. 4 a "dynamically assignable optical signal modulator 400" (Fatehi, col. 5, lines 39-40). Modulator 400 includes a TDM 450 and an E/O converter 460, is coupled to an optical router 470 and takes as input data sources 102. (Fatehi, FIG. 4, col. 5, lines 37-39, 57-58, col. 6, line 10) Also within modulator 400 is a demand estimator controller 407 that estimates the bandwidth required by each of the data sources 102 and allocates one or more wavelengths to each of the data sources 102. (Fatehi, FIG. 4, col. 6, lines 26-29) Furthermore, modulator 400 includes a multiplexer 403 which multiplexes together data from each of the data sources 102 and transmits the multiplexed output to E/O converter 460 for conversion to optical carrier signal format. (Fatehi, FIG. 4, col. 6, lines 54-57, 62-63)

Applicant respectfully traverses the Examiner's rejection. Fatehi does not anticipate Claim 1 under 35 U.S.C. §102(e). Claim 1 includes an exchange area network xswitch wherein the xswitch is adapted to support service switching at a sub-wavelength granularity for a network element in an exchange area network. Fatehi does not teach or suggest an exchange area network xswitch adapted to support service switching for a network element. Instead, Fatehi discloses a "dynamically assignable optical signal modulator 400" (Fatehi, col. 5, line 39). Modulator 400 does include an "electronic switch or multiplexer" 403. (Fatehi, FIG. 4, col. 5, line 64) However, switch 403 is controlled by a system controller 420, which determines "how many wavelengths should be allocated to [a] data source" (Fatehi, col. 6, lines 45-46) and assigns time slots of switch 403 to that data source (Fatehi, col. 6, lines 53-54). The method disclosed by Fatehi does this in an attempt to effectively respond to variations in network traffic. (Fatehi, Summary of the Invention, col. 1, lines 34-35)

Furthermore, Fatehi does not teach or suggest switching at a sub-wavelength granularity. In the Background of the Invention, Fatehi sites the problem that "[a]t different times it is necessary to increase and/or reduce the number of wavelengths needed to provide the desired communication services over the optical links" (col. 1, lines 17-20) and accordingly Fatehi discloses a method for "dynamically assigning the number of wavelengths at originating and terminating optical signal access apparatus". (Fatehi, Summary of the Invention, col. 1, line 36-38). Specifically, Fatehi discloses "In accordance with the present invention, a demand estimator controller 407 [that] estimates the data rate or bandwidth required by each data source 102 and allocates one or more wavelengths to that data source 102". (Fatehi, col. 6, lines 26-29). In the method disclosed by Fatehi, wavelengths in whole are assigned; sub-wavelengths are not assigned. In fact, Fatehi teaches away from switching at a sub-wavelength granularity. Fatehi discloses that "[b]ecause we switch wavelengths, our method is independent of the IP, TCP, and/or SONET/ATM protocols and from the transmission frame structure". (Fatehi, col. 3, lines 62-64).

In contrast, currently amended Claim 1 is limited to:

1. A gateway exchange node, comprising:
an exchange area network (XAN) xswitch; and

a wide area network (WAN) wavelength switch coupled to the
XAN xswitch, wherein the xswitch is adapted to support service
switching at a sub-wavelength granularity for a network element in an
XAN.

Independent Claims 16 and 20 are currently amended to include similar limitations. Support for the amendments can be found in the specification, at least in pp. 14-15. Furthermore, Claims 2-15 directly or indirectly depend on Claim 1, Claims 17-19 directly depend on Claim 16, and Claims 21-22 directly depend on Claim 20. Applicant submits that the rejections of Claims 2-22 are traversed for at least the same reasons set forth above for Claim 1.

In view of the arguments set forth herein, it is respectfully submitted that the applicable rejections have been overcome and that Claims 1-22 are in condition for allowance. If there are any additional charges, please charge them to our Deposit Account Number 500-654.

Respectfully submitted,

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